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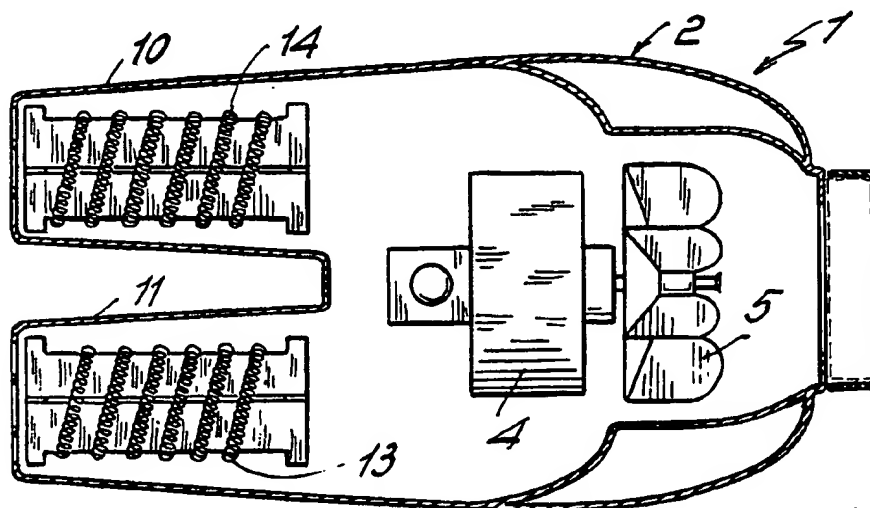
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(54) Hair drier with differentiable airflow delivery.

(57) The hair drier (1) with differentiable airflow delivery has a casing (2) which defines a grip portion and internally accommodates a fan (5) for generating an airflow and an actuation motor (4) for operating the fan (5). The casing has two mutually spaced-apart

airflow delivery outlets (10, 11). Airflow heating elements (13, 14) are provided inside the casing (2) at each of the outlets (10, 11) and can be actuated independently of one another.



*Fig. 3*

EP 0 400 381 A2

The present invention relates to a hair drier with differentiable airflow delivery.

As known, hair driers, in their most general embodiments, are constituted by an outer casing which defines the grip handle and internally accom-

modates a motor for the actuation of a fan which, by sucking in air from outside, feeds the airflow to a delivery outlet where an electric heating resistor is provided.

In so-called professional hair driers, the structure of the hair drier remains unchanged, with the only difference that the power of the electric resistors and the power of the motor are increased.

The operator consequently has available a considerable amount of air which can be delivered at a relatively high temperature.

In this manner, the operator can significantly reduce the time required to dry hair, but on the other hand there is the disadvantage that the relatively concentrated airflow has a temperature which can be high and consequently unpleasant for the user.

Even the adoption of the ordinary airflow diffusion nozzles which are conventionally used is not capable of solving the problem completely, since it is not possible to obtain diffusion of the air in the affected regions as the areas of application of the airflow also vary.

The aim of the present invention is to eliminate the above described disadvantages by providing a hair drier which allows to deliver the airflow in differentiated areas and possibly even with mutually different temperatures.

Within the scope of the above described aim, a particular object of the invention is to provide a hair drier which allows, for an equal installed power, with respect to conventional devices, to reach a temperature which is less unpleasant for the user while having a very short drying time.

Still another object of the present invention is to provide a hair drier which, by virtue of its peculiar characteristics, is capable of giving the greatest assurances of reliability and safety in use.

A further object of the present invention is to provide a hair drier which can be easily manufactured with commonly commercially available elements and materials and which is furthermore competitive from a merely economical point of view.

This aim, the objects mentioned and others which will become apparent hereinafter are achieved by a hair drier with differentiable airflow delivery, according to the invention, which comprises a casing defining a grip portion and internally accommodating at least one fan for generating an airflow and at least one actuation motor for operating said fan, characterized in that it comprises, on said casing, at least two airflow delivery outlets arranged in mutually spaced-apart relation-

ship, airflow heating means being provided, at each of said outlets, inside said casing.

Further characteristics and advantages will become apparent from the description of a preferred but not exclusive embodiment of a hair drier with differentiable airflow delivery, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

figure 1 is a schematic perspective view of the hair drier according to the invention;

figure 2 is a sectional view of the hair drier, taken along the line II-II of figure 1;

figure 3 is a sectional view of the hair drier, taken along the line III-III of figure 2;

figure 4 is a sectional view of the hair drier taken along the line IV-IV of figure 2.

With reference to the above figures, the hair drier with differentiable airflow delivery, generally indicated by the reference numeral 1, comprises a casing 2 which defines, in a per se known manner, a grip portion 3.

An electric motor 4 is provided inside the casing 2 and actuates a fan 5 which draws air in from the outside by means of an intake region 6 and generates an airflow which can be delivered externally.

The important peculiarity of the invention is constituted by the fact that said casing defines two separate and spaced delivery outlets, respectively indicated by the reference numerals 10 and 11, which allow to feed outwardly two separate air streams.

Heating means, constituted by a first electric resistor 13 and by a second electric resistor 14 arranged at the respective delivery outlets, are provided at the delivery outlets 10 and 11.

Said electric resistors have independent power supply means and can therefore be activated either simultaneously or selectively, according to the application requirements of the operator.

The delivery outlets have a preferably mutually parallel path or possibly a slightly convergent or divergent path, so as to deliver two separate airflows which converge into one another at a certain distance from the delivery outlets or diverge.

The presence of two separate delivery outlets allows to generate airflows which have mutually different temperatures and in particular it is possible to use a warm airflow and a cold airflow.

The presence of two different air streams or flows allows the user to have an airflow which is, for example, directed tangent to the user's head and an airflow which remains outward, in practice creating an outward convying air curtain which allows to significantly reduce drying times.

Different delivery nozzles can furthermore be applied to the delivery outlets and can be orientated in various manners, thus allowing to create,

with a single hair drier, an entire range of airflow types according to the particular treatment to be performed by the operator.

To the above it should be furthermore added that it is also possible to provide internal baffles which choke the passage of the airflows between the two delivery outlets, so as to vary the amount of air delivered by the individual outlets according to the contingent requirements.

It is furthermore possible to apply, in a per se known manner, means which allow to adjust the rotation rate of the motor and consequently the amount of air delivered, as well as means which allow to vary the heating temperatures of the various electric resistors, thus obtaining a whole range of operating conditions which can be used in each instance by the operator.

From what has been described it can thus be seen that the invention achieves the proposed aim and objects, and in particular the fact is stressed that the provision of at least two distinct delivery outlets on a hair drier allows to obtain, for an equal installed power, considerable functional advantages, since it is possible to have at least two streams which can be directed independently of one another in an adjustable manner and to reduce the working time required.

The invention thus conceived is susceptible to numerous modifications and variations, all of which are within the scope of the inventive concept.

All the details may furthermore be replaced with other technically equivalent elements.

In practice, the materials employed, as well as the contingent shapes and dimensions, may be any according to the requirements.

Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the scope of each element identified by way of example by such reference signs.

## Claims

1. Hair drier with differentiable airflow delivery comprising a casing defining a grip portion and internally accommodating at least one fan for generating an airflow, and at least one actuation motor for operating said fan, characterized in that it comprises on said casing, at least two airflow delivery outlets arranged in mutually spaced-apart relationship, airflow heating means being provided inside said casing, at each of said outlets.

2. Hair drier, according to claim 1, characterized in that said heating means provided in said

delivery outlets are powered independently of one another.

3. Hair drier, according to claim 1 or 2, characterized in that said heating means are constituted by electric resistors accommodated at each delivery outlet.

4. Hair drier, according to one or more of the preceding claims, characterized in that said delivery outlets are arranged substantially parallel to one another for delivering parallel airflows.

5. Hair drier, according to claim 1, 2, 3 or 4, characterized in that said delivery outlets are mutually convergent.

6. Hair drier, according to claim 1, 2, 3 or 4, characterized in that said delivery outlets are mutually divergent.

7. Hair drier, according to one or more of the preceding claims, characterized in that it comprises variously shaped nozzles which are removably applicable to said delivery outlets.

8. Hair drier, according to claim 1, 2, 3, 4, 5, 6 or 7, characterized in that it comprises baffle means for dividing said airflow between said delivery outlets.

9. Hair dryer according to claim 8, characterized in that said baffle means are movable.

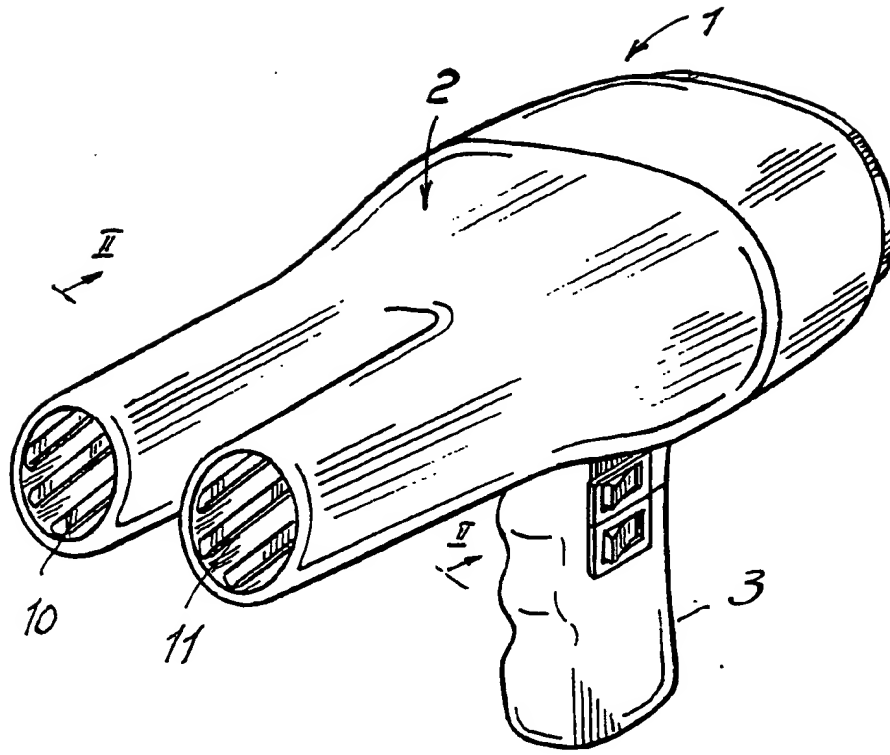


Fig. 1

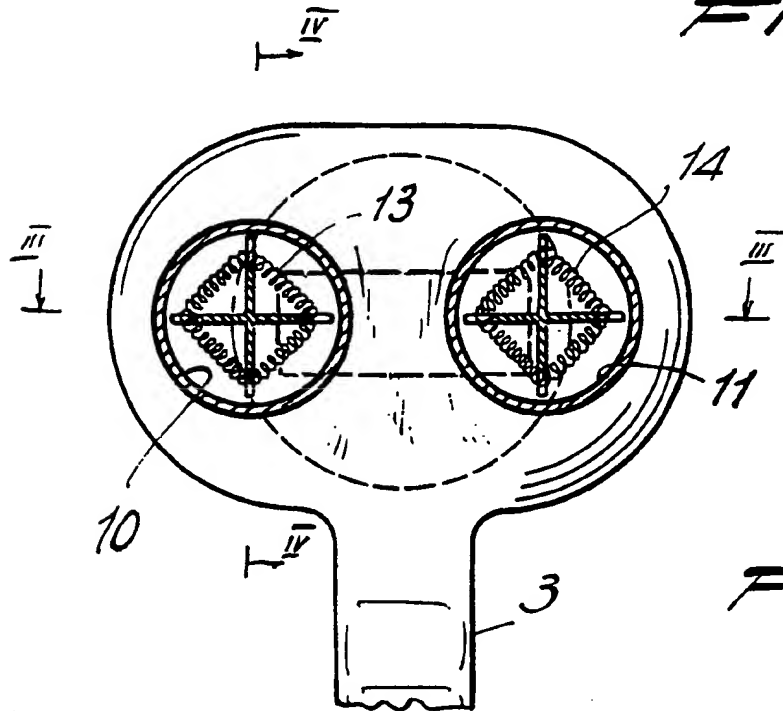


Fig. 2

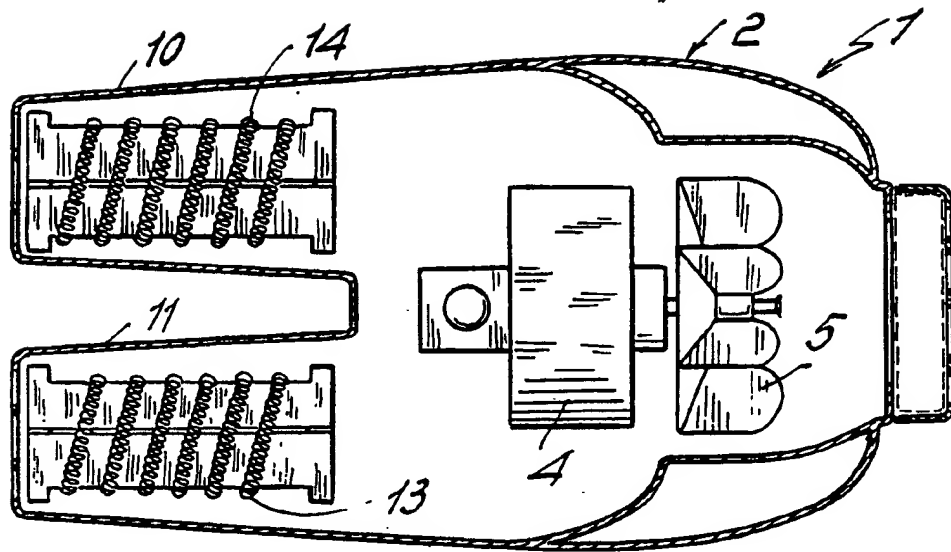


Fig. 3

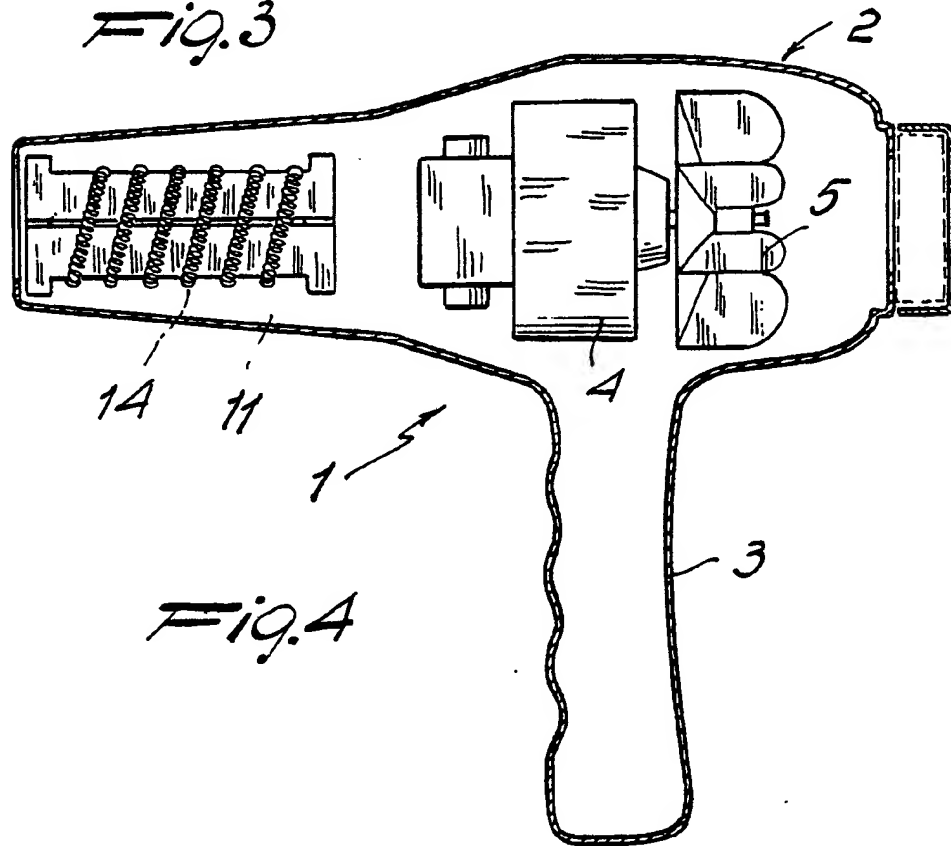


Fig. 4